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EXAMINER

VANATTA, AMY B

ART UNIT	PAPER NUMBER
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3765

DATE MAILED: 12/10/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/733,009

Applicant(s)

FICKER, FRANK

Examiner

Amy B. Vanatta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-48 is/are pending in the application.
- 4a) Of the above claim(s) 44-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The term "sliver" which appears in claim 28 does not have proper antecedent basis in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 28-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the specification as originally filed did not disclose that the fibers which are being treated in the method of the invention are in the form of sliver, as is now recited in claim 28. The specification merely described the fibers as in the form of single fibers, fiber flocks, or a fiber band. Such a disclosure does not necessarily encompass "sliver".

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 37 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 37 recites that the fiber is in the form of fibers, fiber flock, or a fiber band. Claim 28, from which claim 37 depends, recites that the fiber is in the form of fiber sliver. The recitation of claim 37 appears to be more broad than claim 28, since the terms "fibers", "fiber flock", and "fiber band" encompass more than merely sliver. In this manner, claim 37 appears to broaden rather than further limit claim 28. Thus, the metes and bounds of claim 37 are indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 28, 34, 37, 38, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Jackson et al (US 2,450,045).

Jackson et al disclose a method including steps of providing fibers to be stretched, providing at least one fluid in chamber 5, guiding the fluid to the fibers to be stretched, and entraining the fibers with the fluid so as to exert at least a portion of the

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tensile force necessary to cause stretching of the fibers as claimed. Jackson discloses that the fibers may be in the form of sliver (col. 4, line 67; col. 5, line 8). The fluid is disclosed as air or steam (col. 2, lines 13-24) as in claim 34. The yarn or sliver treated by Jackson comprise fibers, as in claim 37. Chamber 5 forms a stretch chamber as in claim 38, and the chamber includes an injector 13 as claimed. The flow of fluid is regulated by valves in the injector (col. 2, lines 13-24), as in claim 43.

8. Claims 28 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill et al (US 2,299,145).

Hill et al disclose a method including steps of providing fibers to be stretched, providing at least one fluid in vessel 1, guiding the fluid to the fibers to be stretched, and entraining the fibers with the fluid so as to exert at least a portion of the tensile force necessary to cause stretching of the fibers as claimed. Hill discloses that the fibers may be in the form of sliver (pg. 2, col. 1, line 53; and pg. 2, col. 2, line 38). The threads or sliver treated by the method of Hill inherently comprise fibers, as in claim 37.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 28, 34, 38-30, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US 5,386,618) in view of Jackson et al (2,427,054).

Graf discloses a process including the steps of providing fibers (F) to be stretched, providing at least one fluid (see liquid tank 3), and entraining the fibers to be stretched with the fluid, in stretching chamber 1, so as to exert at least a portion of the tensile force necessary to cause stretching of the fibers in a stretching direction. The fluid is introduced into the stretch chamber 1 by use of an injector 10 (see Fig. 2), as in claim 38. The fluid is circulated in a recycle circuit (col. 2, lines 19-23) as in claim 39. The fluid is a liquid which appears to be water, as in claim 34, since Graf discloses that "the water" is later separated from the fibers in chamber 2 (col. 2, lines 52-55). Graf discloses that the fibers are premoistened to provide them with a coating of liquid so as to reduce friction, this premoistening step being a step of treating the fibers with an additive for the lessening of cohesion as in claim 40. The flow of fluid is regulated by means of valve 6, as in claim 43.

Graf does not disclose that the fibers or filaments are in the form of sliver, however, as recited in claim 1. Jackson et al ('054) disclose a process of stretching filaments which are in the form of a "sliver-like bundle" (col. 1, lines 22 and 28). The sliver-like bundle is also referred to merely as "slivers" (see, e.g., col. 1, line 51 and col. 2, 13). Thus, the fiber which is stretched in the method of Jackson is "in the form of a fiber sliver" as claimed. Jackson teaches that such a sliver form provides desirable results in a stretching method which includes passing the filaments through a chamber and treating the filaments with fluid in the chamber. Jackson also teaches that treating

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the filaments while in such a sliver bundle allows for a large amount of filaments to be stretched in the one stretching apparatus (col. 2, lines 35-39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the filaments in the method of Graf while in the form of sliver, since Jackson teaches that filaments in the form of sliver are advantageously stretched in a chamber with fluid therein in order to provide a desirable end product and to allow a large amount of filaments to be stretched in one stretching apparatus.

11. Claims 28-35, 37, 38, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finlayson et al (US 2,622,961) in view of Jackson et al (2,427,054).

Finlayson et al disclose a process including the steps of providing fibers to be stretched, providing at least one fluid, and entraining the fibers to be stretched with the fluid so as to exert at least a portion of the tensile force necessary to cause stretching of the fibers in a stretching direction (see col. 12, lines 4-17, disclosing that at least the major part of the stretching action is exerted by the flow of the steam itself, and that the rollers 31-34 may be dispensed with altogether). The fluid is disclosed as steam, which encompasses air as in claim 34. The filamentary textile material in the process of Finlayson meets the claim limitation of being fibers to the extent recited in claim 37. The entraining of the fibers is performed in a stretch chamber and the fluid is introduced into the chamber by means of an inlet passage 24 which forms an injector as in claim 38. The flow of fluid is regulated by means of the valve 37 as in claim 43.

With regard to claims 29-33 and 35, the yarn passes through a series of passages (see Fig. 6) having nozzles which direct steam at pressures and velocities which vary from passage to passage. These nozzles of differing velocities and pressures create alternating tension of the yarn and relaxing of the yarn, which would inherently result in portions of the yarn moving faster than other portions of the yarn as the yarn passes from the inlet to the outlet of the device of Fig. 6 (col. 10, lines 23-75). Some of the steam flows backwards, from right to left (col. 10, lines 56-68), thus exerting components opposite to the stretching direction as in claim 32. The fluid entrains the yarn throughout the length of the passages of Fig. 6, i.e. at both the faster moving portions and the slower moving portions. The inter-fiber cohesive forces are less than the total entraining tensile forces subjected to the fibers as in claim 30. The force on the yarn is produced by pressurized steam, which is a pneumatic force as in claim 35.

Finlayson does not disclose that the fibers or filaments are in the form of sliver, however, as recited in claim 1. Jackson et al ('054) disclose a process of stretching filaments which are in the form of a "sliver-like bundle" (col. 1, lines 22 and 28). The sliver-like bundle is also referred to merely as "slivers" (see, e.g., col. 1, line 51 and col. 2, 13). Thus, the fiber which is stretched in the method of Jackson is "in the form of a fiber sliver" as claimed. Jackson teaches that such a sliver form provides desirable results in a stretching method which includes passing the filaments through a chamber and treating the filaments with fluid in the chamber. Jackson also teaches that treating the filaments while in such a sliver bundle allows for a large amount of filaments to be

stretched in the one stretching apparatus (col. 2, lines 35-39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the filaments in the method of Finlayson while in the form of sliver, since Jackson teaches that filaments in the form of sliver are advantageously stretched in a chamber with fluid therein in order to provide a desirable end product and to allow a large amount of filaments to be stretched in one stretching apparatus.

12. Claims 28-31, 33-38, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birk et al (US 4,346,504) in view of Jackson et al (2,427,054).

Birk et al disclose a process including the steps of providing fibers to be drawn, providing at least one fluid (from supply 16), and entraining the fibers to be drawn with the fluid so as to exert at least a portion of the tensile force necessary to cause drawing of the fibers in a drawing direction. The "drawing" disclosed by Birk is known in the art to be stretching. See, for example, the definition of "drawing" supplied in the text book entitled "Introductory Textile Science" (see reference U on PTO-892). The second definition is applicable here (the first definition is applicable to slivers of staple fibers, while the second definition is applicable to continuous filaments yarns, which are the types of fibers being processed by Birk). This definition of "drawing" reads "The stretching, either hot or cold, of continuous filament yarns to align and arrange the molecular structure within the filament." Thus, the term "drawing" as used by Birk encompasses stretching. The fluid is disclosed as air, as in claim 34 (col. 10, line 29). The filament bundle in the process of Birk meets the claim limitation of being fibers or

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fibers bands to the extent recited in claim 37. The entraining of the fibers is performed in a stretch chamber and the fluid is introduced into the chamber by means of an inlet port 30 which forms an injector as in claim 38. The flow of fluid is regulated by means of the "controlled supply" 16 as in claim 43. Regarding claim 36, Birk teaches that the filaments, during processing with the drawing chamber, are processed so as to be in a state of "openness or filament parallelity and separation" when the filaments exit the processing unit (col. 6, lines 15-18). Since carding of fibers is a process by which fibers are sorted, separated, and at least partially aligned, the drawing apparatus of Birk functions to card the fibers to the extent recited in claim 36.

With regard to claims 29, 30, 31, 33, and 35, the yarn passes through a fluid forwarding apparatus 15 and a friction tube 60. In the friction tube 60, frictional drag forces are produced on the yarn. Thus, portions of the yarn, when comparing the portions within passageway 42, transition zone 57, and friction pipe 61, are moving faster than other portions of the yarn, due to the differing velocities of the fluid and the frictional drag on the yarn. The fluid entrains the yarn at all portions through transition zone 57 and friction pipe 61, and thus the fluid entrains the fibers at both the faster moving portions and the slower moving portions. The inter-fiber cohesive forces are less than the total entraining tensile forces subjected to the fibers as in claim 30. The force on the yarn is produced by air, which is a pneumatic force as in claim 35.

Birk does not disclose that the fibers or filaments are in the form of sliver, however, as recited in claim 1. Jackson et al ('054) disclose a process of stretching filaments which are in the form of a "sliver-like bundle" (col. 1, lines 22 and 28). The

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sliver-like bundle is also referred to merely as "slivers" (see, e.g., col. 1, line 51 and col. 2, 13). Thus, the fiber which is stretched in the method of Jackson is "in the form of a fiber sliver" as claimed. Jackson teaches that such a sliver form provides desirable results in a stretching method which includes passing the filaments through a chamber and treating the filaments with fluid in the chamber. Jackson also teaches that treating the filaments while in such a sliver bundle allows for a large amount of filaments to be stretched in the one stretching apparatus (col. 2, lines 35-39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the filaments in the method of Birk while in the form of sliver, since Jackson teaches that filaments in the form of sliver are advantageously stretched in a chamber with fluid therein in order to provide a desirable end product and to allow a large amount of filaments to be stretched in one stretching apparatus.

13. Claims 28, 34, 37, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terakawa et al (US 5,511,960) in view of Jackson et al (2,427,054).

Terakawa et al disclose a process including the steps of providing fibers to be stretched, providing at least one fluid, and entraining the fibers to be stretched with the fluid so as to exert at least a portion of the tensile force necessary to cause stretching of the fibers in a stretching direction (see col. 7, lines 51-55). The fluid is disclosed as air as in claim 34 (col. 7, lines 57-58). The material being treated is fibers, as in claim 37. The fibers are entrained with the fluid in a stretch chamber and a spinning apparatus (15) is provided to spin the fibers before the step of entraining the fibers b the fluid

which travels through passage 16. The fluid is circulated into the chamber (through passages 18,16) between the spinning apparatus and the stretch chamber as in claim 41.

Terakawa does not disclose that the fibers or filaments are in the form of sliver, however, as recited in claim 1. Jackson et al ('054) disclose a process of stretching filaments which are in the form of a "sliver-like bundle" (col. 1, lines 22 and 28). The sliver-like bundle is also referred to merely as "slivers" (see, e.g., col. 1, line 51 and col. 2, 13). Thus, the fiber which is stretched in the method of Jackson is "in the form of a fiber sliver" as claimed. Jackson teaches that such a sliver form provides desirable results in a stretching method which includes passing the filaments through a chamber and treating the filaments with fluid in the chamber. Jackson also teaches that treating the filaments while in such a sliver bundle allows for a large amount of filaments to be stretched in the one stretching apparatus (col. 2, lines 35-39). It would have been obvious to one having ordinary skill in the art at the time the invention was made to process the filaments in the method of Terakawa while in the form of sliver, since Jackson teaches that filaments in the form of sliver are advantageously stretched in a chamber with fluid therein in order to provide a desirable end product and to allow a large amount of filaments to be stretched in one stretching apparatus.

14. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Finlayson et al (US 2,622,961) in view of Jackson et al (2,427,054), as applied to claim 28 above, and further in view of Hill et al (US 2,276,394).

Finlayson et al modified in view of Jackson et al ('054) discloses a process as claimed, however the step of drying the fibers is not disclosed. Hill et al disclose a process of stretching textile materials, wherein the filaments are stretched in a stretching chamber (9) with the use of steam. Hill et al disclose a step of drying the filaments after stretching by means of drying drums 26. It is conventional in art to dry the filaments, threads, or yarns after being stretched or otherwise treated with fluid so as to ready the filaments for storage or further processing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to dry the filaments of Finlayson et al modified in view of Jackson et al after stretching in order to prepare the filaments for storage or further textile processing, as disclosed by Hill et al.

Response to Amendment

15. The amendment filed 9/29/03 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The recitation in claim 28 that the fibers are "in the form of a fiber sliver" is new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

16. Applicant's arguments with respect to claims 28-43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

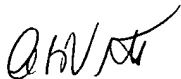
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is (703) 308-2939. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on (703) 305-1025. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


Amy B. Vanatta
Primary Examiner
Art Unit 3765

abv
December 5, 2003